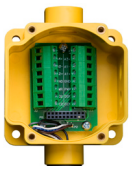
What is a SureCross DX80?

The SureCross DX80s are industrial I/O radios used to form wireless sensor networks for monitoring and control applications. SureCross DX80s include...

Reliable Radio. Uses state-of-the-art technology to transmit signals over many miles.

Enclosure. The DX80 housing is IP67/NEMA 6 rated for outdoor installation.



Industrial I/O. Includes discrete, analog, temperature, serial, counter, and/or humidity.

Power Supply. No need to run power wires. A three to five year battery life is typical for most FlexPower Nodes and sensors.

Banner's SureCross wireless solution is...

Innovative. No other wireless product combines all the subsystems of the DX80.

Powerful. Monitor and control signals that were previously too far away or too difficult to access.

Economical. The DX80 integrated solution costs a fraction of what building your own system from individual components would cost.

wireless
innovat I/O n.

Banner Engineering Corp. • Minneapolis, MN U.S.A.
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I/O Types

Nodes and Gateways include a mix of up to 12 inputs and outputs

Discrete

- PNP/NPN
- NPN/NMOS
- Dry contact (relay)
- Counter

Analog

- 0–20 mA
- 4–20 mA
- 0–10V dc
- PT100 RTD
- Thermocouple

Node Types

- *Flex*Power™ Nodes with DIP switch selectable options
- Temperature measurement Nodes for thermocouples and RTDs
- Counter Nodes for cyclic or event counting
- Temperature and humidity Node with optional integrated battery

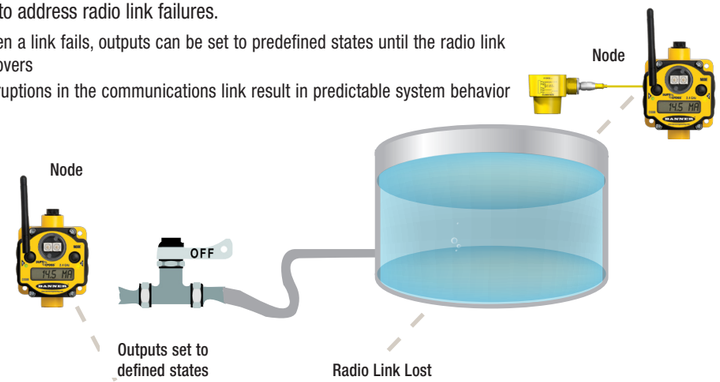
Hazardous Area

- DX99 Polycarbonate Housing
  ATEX Zone 0; Class I, Div 1 (FM)
- DX99 Metal Housing
  ATEX Zone 0 (Gas), Zone 20 (Dust)
  Class I, Div 1 (FM)
- DX80...C
  Class I, Div 2 (FM)

Determinism and Error Management

The SureCross™ DX80 wireless devices employ a deterministic link time-out method to address radio link failures.

- When a link fails, outputs can be set to predefined states until the radio link recovers
- Disruptions in the communications link result in predictable system behavior



DX80 Gateway

Gateways are the master devices of the SureCross™ wireless network.

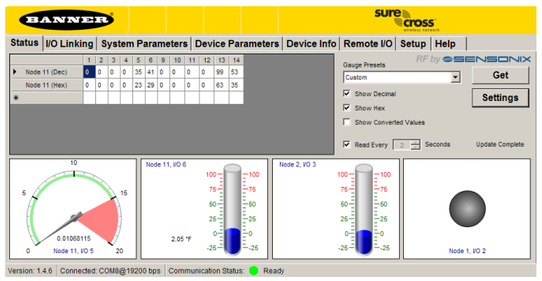
- Physical I/O or host control models
- Site Survey analyzes the radio link with the Node
- Polling to verify the radio link is functional
- Host communication protocols include RS-485 Modbus RTU, Modbus/TCP, and EtherNet/IP

Site Survey results are reported as a percentage of data packets received at specific signal strengths.

User Configuration Tool (UCT)

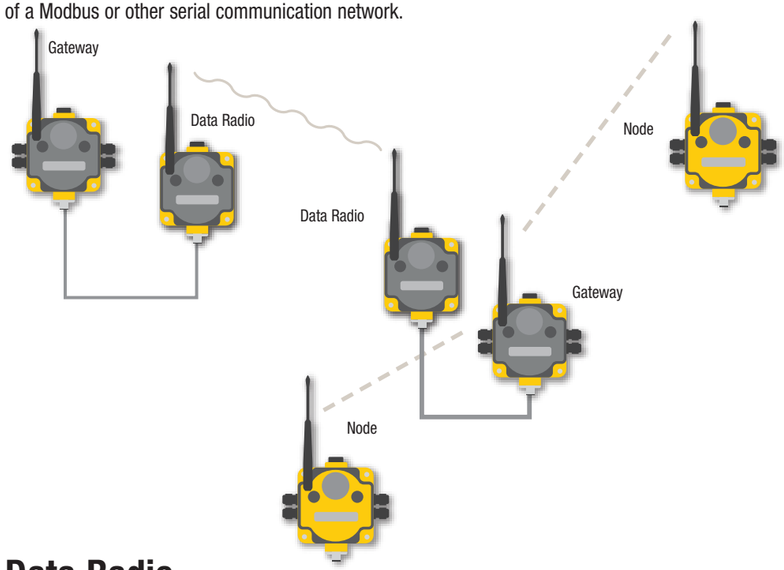
The UCT uses a USB to RS-485 converter cable to connect a Gateway to a computer's USB port. This allows users to configure the one-to-one I/O linking and polling parameters of a SureCross Wireless Network.

The software also enables monitoring of current network status and other system parameters.



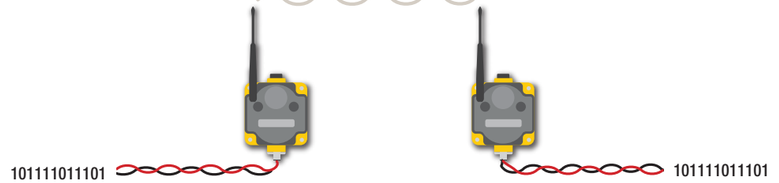
Range Extension

Data radios are wireless industrial communication devices used to extend the range of a Modbus or other serial communication network.



Data Radio

Data radios support RS-485 and RS-232 Modbus and DF1 communication.



FlexPower™ Supply Options

- 10–30V dc power
- Long-life battery, up to 5 years
- Solar panel and rechargeable battery pack

Switched Power

The switched power supply provides power for the radio and most third-party sensors. Power is cycled on to the sensor to take a sensor reading, then cycled off to extend the battery life.